

# Memorandum



**Date:** July 19, 2007

**To:** Honorable Chairman Bruno A. Barreiro  
and Members, Board of County Commissioners

**HPSC**  
**Agenda Item No. 7(E)**

**From:** George M. Burgess  
County Manager

**Subject:** Urban Development Boundary Fire Wells Report

The following report is presented as a response to the Health and Public Safety Committee request of information that addresses instances of catastrophic fire damage due to remoteness and lack of water supply in residences outside of the Urban Development Boundary (UDB).

## **Incident Background**

On May 5 2007, a residential fire outside the UDB resulted in one of the occupants losing her life. In this particular case, the fire was initially reported as fully engulfing the home; therefore, regardless of how quickly Miami-Dade Fire Rescue (MDFR) units could have responded there would have been no change in the outcome. However, in situations where those critical minutes can prevent loss of life, what would normally have been the closest MDRF response unit, Tanker 60, was out of quarters responding to a vehicular accident at SW 216 St. and Krome Ave. Station 60 is one of eleven (11) MDRF fire stations that house a single response apparatus.

## **Fire Well Background**

There are approximately 900 homes in Miami-Dade County located outside the UDB. Some homes have existing wells that are in place primarily for agricultural purposes and are insufficient for a suitable water supply for fire protection. Fire hydrants, the primary source of water used for firefighting operations throughout Miami-Dade County, are in limited supply or non-existent in many areas of the UDB. In addition, due to the lack of hydrants as in the particular incident described above, the crews had to draft water from the pool on the property in order to extinguish the fire.

Although Fire Wells may provide some resolution, there is significant capital cost associated with their installation. There is also recurring costs associated with regular maintenance and testing of the wells. The cost of installation of Fire Wells can range from \$10,000 to \$50,000, based upon square footage of the structure, occupancy classification, and the proximity of exposures in accordance with the National Fire Protection Association 1142. Maintenance costs may range from \$500 to \$1,100 per required session; however, there may be an offset derived from insurance premium reduction based upon an improved water supply. It is estimated that approximately one (1) Fire Well should be installed per every residence located outside the UDB.

In order to efficiently ensure the ability to utilize Fire Wells when necessary, a maintenance, testing and repair program is required. Fire Wells are tested upon installation, but over time can experience various problems such as rocks and sand mixing with the well water, rusting of fire department fittings, access problems due to overgrowth of vegetation, and physical damage due to vandalism and/or vehicular contact. Fire Wells should be tested on a bi-annual basis, but this testing should not be performed by MDRF apparatus. Fire pumps on the vehicles can be damaged or destroyed by rocks and sand that can enter the system. If this occurs while operating the fire wells during an actual incident, the lack of water may result in a loss of life. This makes the flushing of the fire wells a critical requirement. In addition, Fire Well specifications call for a testing period of a minimum of two hours.

A handwritten signature in cursive script, reading "Alina T. Hudak".

Alina T. Hudak  
Assistant County Manager